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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,360	08/01/2000	MASAO MURADE	106394	9749

25944 7590 09/11/2002

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EXAMINER

AKKAPEDDI, PRASAD R

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/601,360

Applicant(s)

MURADE, MASAO

Examiner

Prasad R Akkapeddi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,9. 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings filed on 08/01/2000 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3, 6, 26-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. As to claims 1-3, 6 and 26-29: The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a light shielding first conductive layer disposed between a semiconductor layer constituting a source region and a drain region of

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the thin-film transistor and the pixel electrode, the first conductive layer being electrically connected to the semiconductor layer and electrically connected to the pixel electrode" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

It is also claimed that "a second conductive layer comprising a film comprising the first conductive layer, at least partially overlapping the data lines in a plan view". It is not clear whether the first and second conductive layers are one same layer or two separate layers. Also, a second conductive layer is not described in the specification and as such it would be difficult to identify which layer the applicant is referring to.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato (U.S. Patent No. 6,067,131).

As to Claim 1: Sato in describing an electro-optical device, discloses (Fig. 1A and 1B), a substrate (1), a plurality of scanning lines (8) formed above the substrate, a plurality of data lines (9) formed above the substrate, a thin-film transistor connected to each of the scanning lines and each of the data lines, a pixel electrode (6) connected to the thin-film transistor, a light shielding first conductive layer (16M, 16P) disposed between a semiconductor layer constituting a source region (S) and a drain region (D) of the thin-film transistor and the pixel electrode, the first conductive layer being electrically connected to the semiconductor layer (10) and electrically connected to the pixel electrode (6). A second conductive layer (16F) comprising a film the first conductive layer, at least partially overlapping the data lines (9) (Fig. 1B) and (Col. 4, lines 38-40) in a plan view.

As to claim 2: Sato in (Fig. 1B) discloses that the second conductive layer (16F) at least partially overlapping the pixel electrode (6) in a plan view.

As to claim 3: Sato discloses (Fig. 1A), that the first conductive layer (16M,

16P) is electrically connected to the semiconductor layer through a first contact hole (G) and is electrically connected to the pixel electrode (C) through a second contact hole.

As to claim 4: Sato discloses in (Fig.1A) that the data lines are electrically connected to the semiconductor layer through a third contact hole (no number assigned).

As to claim 5: Sato discloses in (Fig. 1B) that the data lines (9) at least partially overlapping the pixel (6) electrode in a plan view.

As to claim 6: In (Col 2, lines 61-65) Sato discloses that the second Conductive layer electrically connected to a constant-potential line (fixed).

As to claim 7: Sato discloses in (Fig 1A) and in (Col 3, lines 56-65) a light-shielding film (16M, 16P) formed on the substrate side of at least a channel region (G) of the semiconductor layer (10) with an underlying insulating film (17) there between.

As to claim 8: Sato discloses (Col 4, lines 6) that the first conductive layer (16M, 16P) and the second conductive layer (16F) are made from Ti which is a high-melting point metal.

As to claim 9: Sato discloses that the second conductive layer (16F) and the data lines (9) are at least partially disposed opposite to each other (Fig. 2A) with an interlayer insulating film (17) there between.

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As to claims 10-25: Sato discloses the formation of a storage capacitor and its relationship with various other elements in (Col 5 and 6). Sato also discloses the formation of data lines, first conductive layer and the second conductive layer and their relationships with each other (Col 6, lines 1-67).

As to claims 26-29: Sato discloses a method (Cols. 6,7 and 8) of fabricating an electro-optical device that discloses all the claimed features.

As to claim 30: Since Sato discloses all the limitations of claim 1, and Sato's device could also be in any electronic apparatus.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zhang et al (U.S. Patent No. 5,966,193). Discloses a light shielding layer similar to the applicant's Fig. 3.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 703-305-4767. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on 703-308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

RA

September 4, 2002

William L. Sikes

William L. Sikes
Supervisory Patent Examiner
Technology Center 2800